

## ABSTRACT

Pertactin (PRN) is an outer membrane protein expressed by *Bordetella pertussis*, *Bordetella parapertussis*, and *Bordetella bronchiseptica*, which induces protective immunity to *Bordetella* infections. The immunodominant and immunoprotective epitopes of pertactin include two repeated regions, I and II. Comparison of these two repeated regions showed the pertactin of *B. parapertussis* is invariant, whereas the pertactin of *B. pertussis* varies mostly in region I and *B. bronchiseptica* varies in both the repeated regions I and II. Compositions containing pertactins and pertactin fragments containing variant sequences in these regions are useful as immunogenic compositions.